



TITLE:

Cover

AUTHOR(S):

CITATION:

Cover. The Review of Physical Chemistry of Japan 1965, 35(1)

ISSUE DATE:

1965-12-20

URL:

<http://hdl.handle.net/2433/46855>

RIGHT:

THE REVIEW OF PHYSICAL CHEMISTRY OF JAPAN

Founded in 1926

CONTENTS

Tsunesuke Doi : Physico-chemical Properties of Sulfur II Effects of Different Types of Reagent on Viscosities of Liquid Sulfur.....	1
Tsunesuke Doi : Physico-chemical Properties of Sulfur III Dissolved State of Sulfur Polymers in Liquid Sulfur	11
Tsunesuke Doi : Physico-chemical Properties of Sulfur IV Critical Polymerization Temperatures and Polymerization Equilibrium Constants of Sulfur.....	18
Jiro Osugi and Yoichi Kitamura : Optical Studies of Pressure Effects (I) The Measurement of the O-H Stretching Vibration Band of Ethanol.....	25
Jiro Osugi, Masanori Sato and Naoyuki Ifuku : Micelle Formation of Cationic Detergent Solution at High Pressures.....	32
Jiro Osugi, Hironobu Kubota and Katsukuni Ueba : Studies on Explosion Limits of Butadiene-Air Mixture.....	38
Kiyoshi Kitamura Inactivation of Enzymes under High Pressure I Inactivation of Salivary α-Amylase under High Pressure	44

THE REVIEW OF PHYSICAL CHEMISTRY OF JAPAN

(Butsuri-Kagaku no Shinpo)

President: Shinkichi Horiba, Professor Emeritus, M. J. A.

Members of Council:

Azuma Okuda (Chief)

J. Osugi	Y. Kachi	I. Tsujikawa
K. Kodera	H. Takagi	
R. Goto	H. Hatano	
T. Yamamoto	W. Jono	
T. Fujinaga	R. Goto	
S. Tanaka	E. Suito	

Board of Editors:

J. Osugi (Chief)	<i>Kyoto University</i>
W. Jono (Associate)	<i>University of Kobe</i>
R. Goto (")	<i>Kyoto University</i>
E. Suito (")	<i>Kyoto University</i>
S. Shida	<i>Tokyo Institute of Technology</i>
T. Kitagawa	<i>Yokohama University</i>
M. Tamura	<i>Kyoto University</i>
H. Matsuyama	<i>Doshisha University</i>
T. Makita	<i>Kyoto Technical University</i>
K. Suzuki	<i>Ritsumeikan University</i>
K. Hirota	<i>University of Osaka</i>
S. Seki	<i>University of Osaka</i>
T. Ishino	<i>University of Osaka</i>
T. Imoto	<i>Municipal University of Osaka</i>
R. Fujishiro	<i>Municipal University of Osaka</i>
O. Toyama	<i>Prefectural University of Osaka</i>
S. Ono	<i>Prefectural University of Osaka</i>
S. Tsuchihashi	<i>University of Kobe</i>
S. Hasegawa	<i>Okayama University</i>
H. Togawa	<i>Doshisha University</i>

Secretary:

K. Shimizu	M. Sato
H. Matsumiya	

December 20, 1965

Communications to the Editor should be addressed to Board of Editors, The Physico-Chemical Society of Japan, College of Science, Kyoto University, Kyoto, Japan.

Business Correspondences should be addressed to: Secretary, The Physico-Chemical Society of Japan, College of Science, Kyoto University, Kyoto, Japan.

Purchase Order should be addressed to: Maruzen Co., Ltd., Nihonbashi, Chuo-ku, Tokyo, Japan.

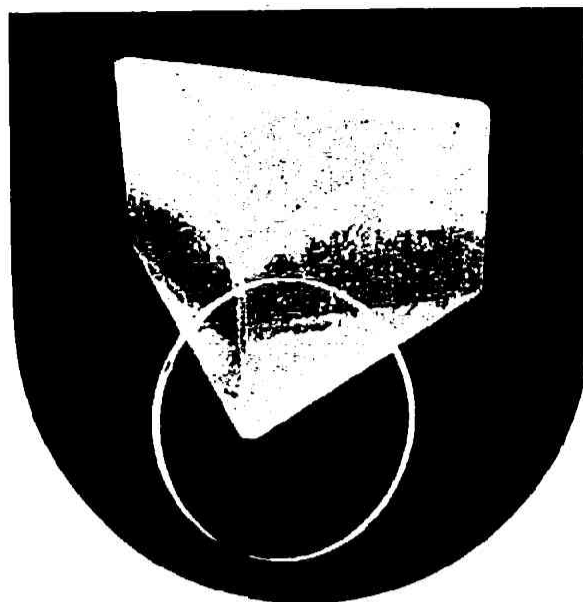
Published by

THE PHYSICO-CHEMICAL SOCIETY OF JAPAN

(Nippon Butsuri-Kagaku Kenkyu Kai)

College of Science, Kyoto University, Kyoto, Japan

Printed by KAWAKITA INSATSU CO., Kyoto, Japan



Single crystals of HORIBA INSTRUMENTS, INC., offered as complete products ready to use which are free from impurity absorption, have acquired worldwide reputations.

Our scintillators, such as NaI (Tl), CsI (Tl) or CaI_2 are also credited and used internationally by the nuclear scientists, for the established qualities.

	NaCl	KCl	KBr	KI	LiF	AgCl	KRS-5*	KRS-6*	CsI
Limit of transparency (microns)	~15	~21	~27	~31	~6	~30	~40	~34	~70
Refractive index:	1.555	1.498	1.559	1.667	1.394	2.071	2.629	2.336	1.987
Solubility:**	35.7	28.5	53.5	127.5	0.27	8.9×10^{-5}	0.02	0.32	44
Specific gravity: gr/cm ³	2.16	1.59	2.75	3.13	2.64	5.56	7.2	7.19	4.53
Melting point: °C	801	776	730	680	843	455	415	424	621
Maximum diameter: cm	120	120	120	120	100	60	60	60	60
Maximum height: cm	100	100	100	70	60	100	60	100	100

* KRS-5 is a compound single crystal of TlI and TlBr, and KRS-6 is a compound single crystal of TlCl and TlBr.

** g/100 gr water at normal temperature.

HORIBA INSTRUMENTS, INC.

Head office & Factory: Nakagawara Miyano Higashi-machi, Kisshoin, Minami-ku, Kyoto Tel: 37-8121
Tokyo branch office: No. 2-10, Nishihatchobori, Chuo-ku, Tokyo. Tel: 552-7661



Now Ready For Use : The Tri-band ESR

JES-3BS ESR

.... with Unique Linear Field Sweep Unit !

The JES-3BS is a new versatile ESR instrument with excellent features :—

Super Sensitivity

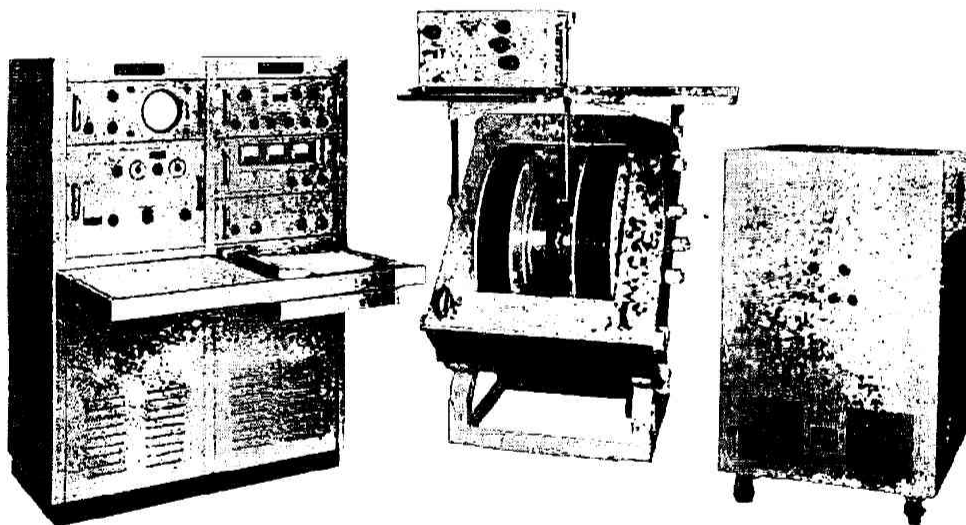
Ultra Resolution

Easy Operation

Valuable Attachments

Tri-Measurement at X, K & Q Bands

The JES-3BS which is provided with a unique low-impedance magnet, a direct read-off circuit of the magnetic field and a linear field sweep method has the following records.



● Specifications (at X-Band measurement)

Detection Sensitivity..... 1×10^{11} spin/gauss

(100 kc modulation)

1×10^{12} spin/gauss

(80c/s modulation)

Resolution..... 1×10^{-5} or more

Standard Frequency..... 9,400 Mc (X-band)

Cavity Resonator..... TE₀₁₁ (cylinder)

Versatile type

Variable Range

of Mag. Field 500~13,000 gauss

(18,000 gauss with the auxiliary pole piece)



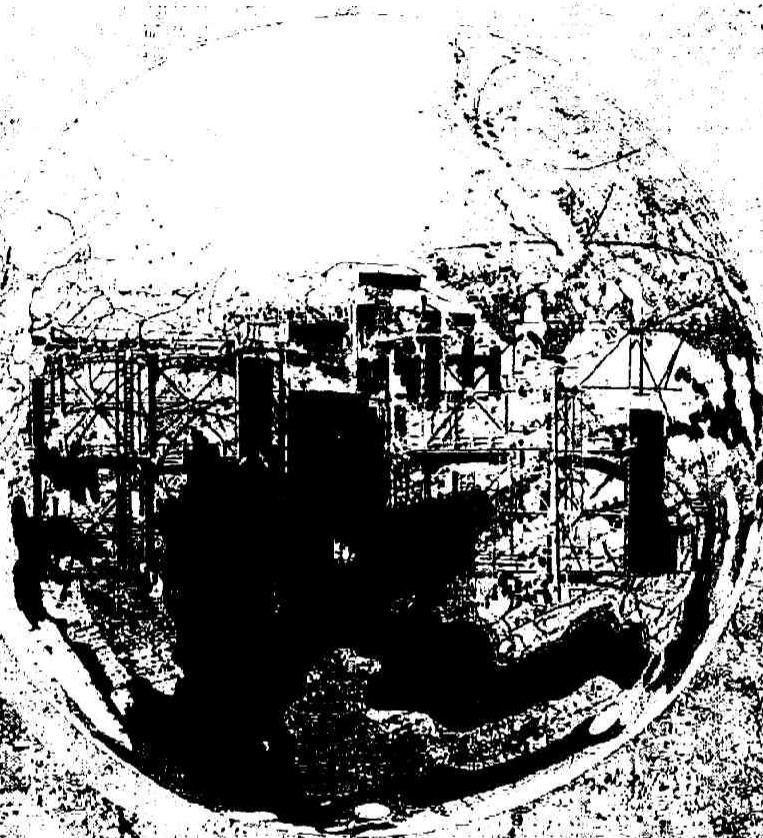
ESR Signal of Cr³⁺ in single crystal of ruby

N.B.: Absorption signals distinctly appear in a wide range by the linear field sweep unit.

JAPAN ELECTRON OPTICS LABORATORY CO., LTD.

New Tokyo Bldg., Tokyo, Japan

The World Knows...



... how the chemical know-how of Toyo Koatsu is contributing to the increase of agricultural production, the modernization of industries and the betterment of people's daily lives. Toyo Koatsu techniques are licensed and products have been exported to more than 30 countries.

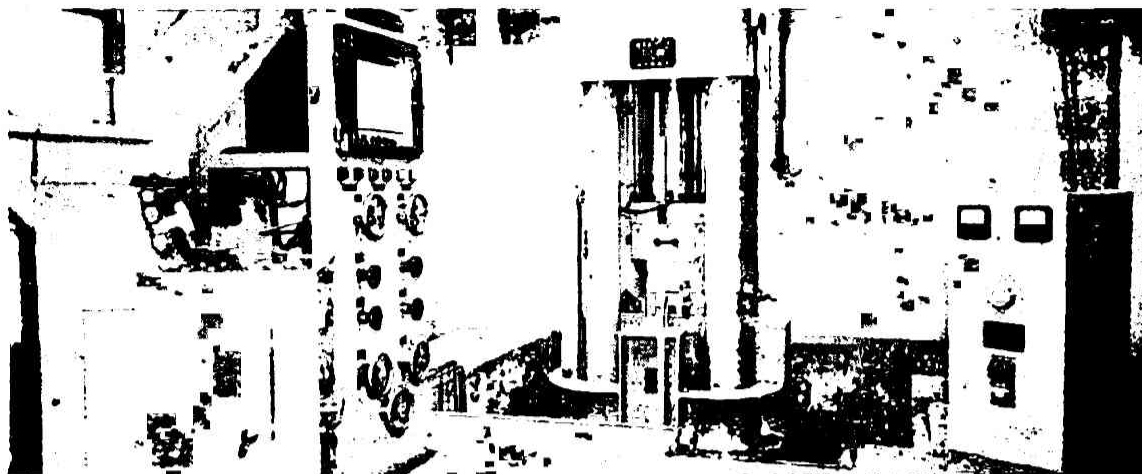
These include urea, ammonium sulphate, synthetic resins and plastics, and other chemicals.



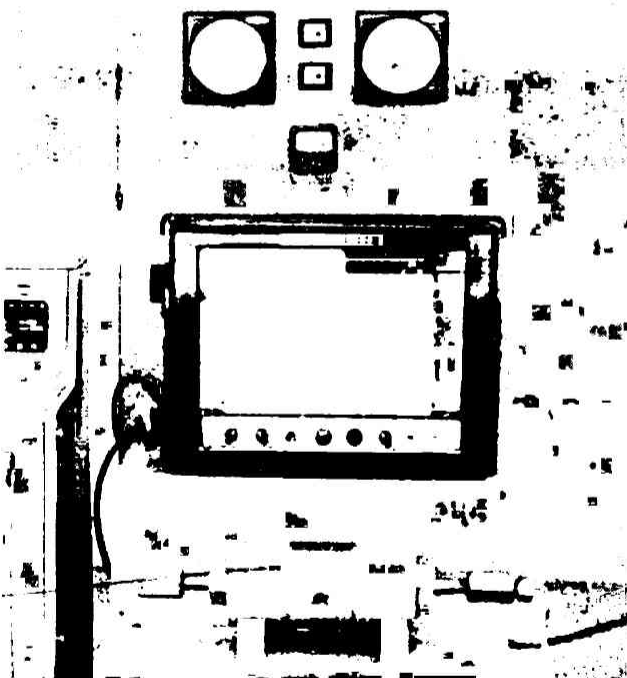
TOYO KOATSU
Industries, Inc.

Head Office: 1-1-1, Hongoku-Cho, Chuo-ku, Tokyo
Telex address: "TOATSUIND TOKYO"

VERY HIGH PRESSURE EQUIPMENT



"DIA" Equipment, Cubic Type Very High Pressure Equipment, Anvil Face 10mmX10mm, Total Weight 8 ton



S.H.P. Measurement Gauge, Electrical Resistance Strain Gauge Type, Calibrated with the Master Free-Piston Gauge in Kobe Steel. (Japanese PAT. No.294153)

Liquid Pressure up to 15,000kg/cm²
Solid Pressure up to 100,000kg/cm²
for Production and Research Purposes
Super High Pressure Generator Unit
Super High Pressure Reaction Vessel
Super High Pressure Measurement Gauge
Super High Pressure Equipment

Other Major Products :

Fertilizer Plant, Cement Plant, Oxygen Plant, Rolled Steel Products, Steel Castings & Forgings, General Industrial Machineries, Light Metal Alloy Castings & Forgings, Titanium Products, Arc Welding Electrodes, Small Tools, Non Ferrous Metals & Their Products, Sugar Cane Milling Plant.



KOBE STEEL

MACHINERY DIVISION

HEAD OFFICE: 36, 1-chome, Wakinohama-cho, Fukai-ku, Kobe, Japan
OVERSEAS OFFICES: New York, Dusseldorf, Paris
TOKYO OFFICE: Yanagiya Bldg., No. 2-1, Tori 2-Chome, Nishiobashi, Chuo-ku, Tokyo, Japan



NISSO HI-CHLON

(Ingredient : Calcium Hypochlorite 70% min, granular & tablet)

- Sodium Cyanide
- Sodium Hydrosulphite
- TDI (Tolylene Diisocyanate)
- PPG (Polypropylene Glycol)
- Sulfisoxazole (Sulphafurazole)
- Benzoyl Peroxide (21-22%)



Manufacturer & Exporter of Chemicals

NIPPON SODA CO., LTD.

Head Office : Otemachi, Tokyo, Japan

Cable Address : "SODANIPPON" TOKYO